

REMARKS

Claims 1-13, 15, and 17-35 are pending in the present application, with claims 1, 21, 30, 33, and 34 being the independent claims.

Claims 1-13, 15, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Blum et al. (U.S. Patent 5,918,223) and Kjaer (U.S. Pat. No. 4,603,386).

The Applicants previously pointed out that the MFCCs are not understood to be synonymous or the same as critical band filtering. MFCC calculations are derived from the fast fourier transform (FFT)/discrete cosine transform (DCT) calculations wherein frequencies are instead placed logarithmically on the mel scale. This is not believed to be the same as critical band filtering.

In the present Office Action, the examiner noted that:

Regarding the argument that Blum does not teach critical band filtering, wherein it is argued that Mel-frequency cepstral coefficients (MFCCs) are not synonymous or the same as critical band filtering, the Office gives the broadest reasonable interpretation of the claim without reading in the specification. Blum teaches filtering the signal and transforming the signal to MFCCs, wherein it read that this filtering is a critical filtering of the input signal.

Action p. 2. Applicants have amended the claim to make more clear that the nature of the particular filtering. And in particular, claim 1, as amended, recites "that filters the audio data proximate a human auditory frequency range." Applicants submit that the MFCC, at least do not filter audio data proximate a human auditory frequency range.

Accordingly, Applicants respectfully request that the examiner withdraw the rejection of claims 1-13, 15, and 17-35 for at least the foregoing reasons.

Claims 21-25, 27, and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Blum et al.

Applicants previously pointed out that Blum is understood to teach only that, after the DSP processing is performed to create a database of DSP feature vectors for sound files, a

user can create “classes” of sounds (e.g., “bird sounds”, “rock music”, etc.) by specifying a set of sound files that belong to this sound class in N-space. Blum Col. 3, lines 30-34.

Use of the system by the user, and creation of a classification chain, however, are separate acts. In the case of Blum, Blum creates a database of DSP only feature vectors (the DSP only classification structure) and then allows a user to navigate the structure by arbitrarily defining classes within the DSP only feature vector space (use of the DSP only classification structure).

In contrast, as recited in claim 21, Applicants’ invention forms a classification chain based upon a plurality of spectral properties vectors, wherein each spectral properties vector includes both the spectral properties class(es) that are not based on DSP and spectral properties characteristic(s) that are based on DSP.

In response, the examiner noted that:

the two steps of the method are not limited to a joint process, or a disjoint process (i.e. separate acts).

Action p. 3.

Applicants have amended the claims to more clearly recite the distinction. Claim 21 as amended, recites: “forming a classification chain based upon said plurality of spectral properties vectors and the at least one spectral properties class.” Accordingly, Applicants respectfully request that the examiner withdraw the rejection of claims 21-25, 27, and 29.

Claims 30-33 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Gjerdingen (USP 6,539,395).

The examiner indicates that:

Gjerdingen teaches, in Fig. 4 and col. 6, lines 38-64, that various different data is collected and classified as acquired data. ***Expert data and DSP data are among the various different data that is gathered*** into acquired data and placed in a research database. In light of this teaching, claims 30-33 now stand rejected under 35 USC 102(e).

Action p. 3 (emphasis added.)

Applicants respectfully submit that the present invention, as recited in claims 30 and 33, requires a classification chain data structure, wherein each vector of the chain includes data representative of:

- *spectral* properties class(es) as classified by humans; **and**
- spectral properties characteristics as determined by digital signal processing.

In contrast, the cited portion of Gjerdingen actually teaches:

FIG. 4 is a block diagram showing various components that may be used to develop a database that allows music listeners to search for music based upon *music content*, perceptual qualities of music and music attributes, according to one embodiment of the present invention. Listener perception data 401, Instrument information data 402, Expert Information data 403, and Explicit Pairwise data 403A are collected and then stored as Acquired data 404 and thereafter fed into a Research database 405 (also referred as "R&D database"). Basic music fact data 402A, including title of the music, category/genre if known, and date of 2 recording etc. is also sent to R&D database 405. Data describing music attributes may also be collected by Digital Signal processing ("DSP") and stored as DSP data 403B, Radio logging and stored as Radio logged data 403D, and Internet Harvesting and stored Internet Harvested data 403E, using Spider techniques.

Gjerdingen, col. 6, ll. 38-54 (emphasis added). As such Gjerdingen does not teach the *spectral* properties classes as classified by humans. For at least that reason, Applicants request that the examiner withdraw the rejection of claims 30-33.

Claims 17, 26 and 34-35 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Blum in view of Gjerdingen.

Claims 17 and 26 depend from claims 1 and 21, respectively. Applicants submit that they are allowable for at least the reasons cited with respect to the claims from which they depend.

Applicants respectfully submit that nowhere is the art of record believed to teach or suggest the formation of a classification chain data structure that includes ***both spectral perceptual qualities as classified by human experts*** and DSP processed data values. Reconsideration and withdrawal of the rejection to claim 34 is respectfully requested. Claim 35 depends from claim 34 and is believed allowable for the same reasons.

Claim 28 is rejected under 35 U.S.C. 103(a) as allegedly unpatentable over Blum. Inasmuch as claim 28 depends from claim 21, Applicants submit that claim 28 is

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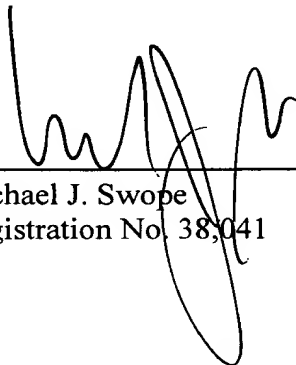
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patentable over Blum at least for the same reason as independent claim 21.

CONCLUSION

Accordingly, Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Office Action, and submit that Claims 1-13, 15, and 17-35 of the application are in condition for allowance. Favorable consideration and passage to issue of the application at the Examiner's earliest convenience is earnestly solicited.

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